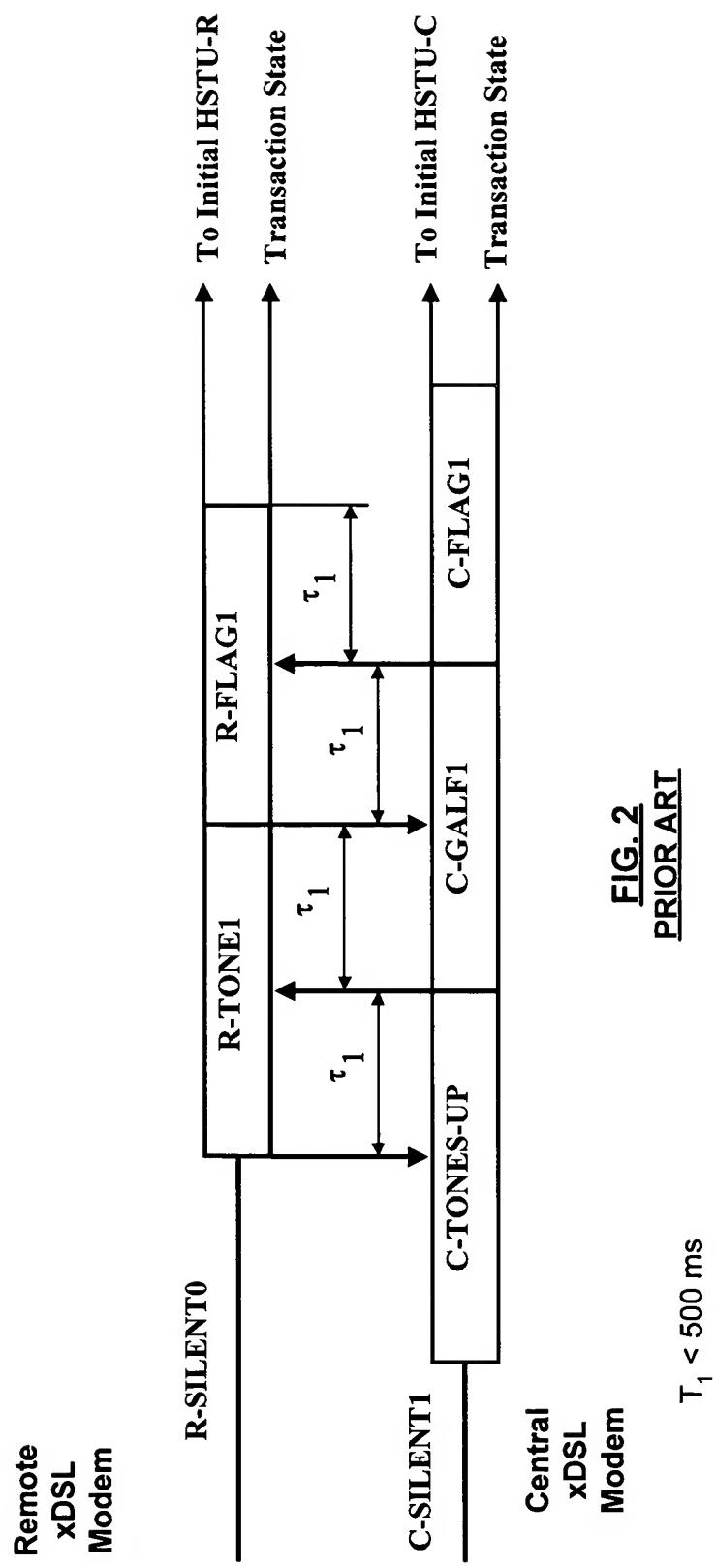
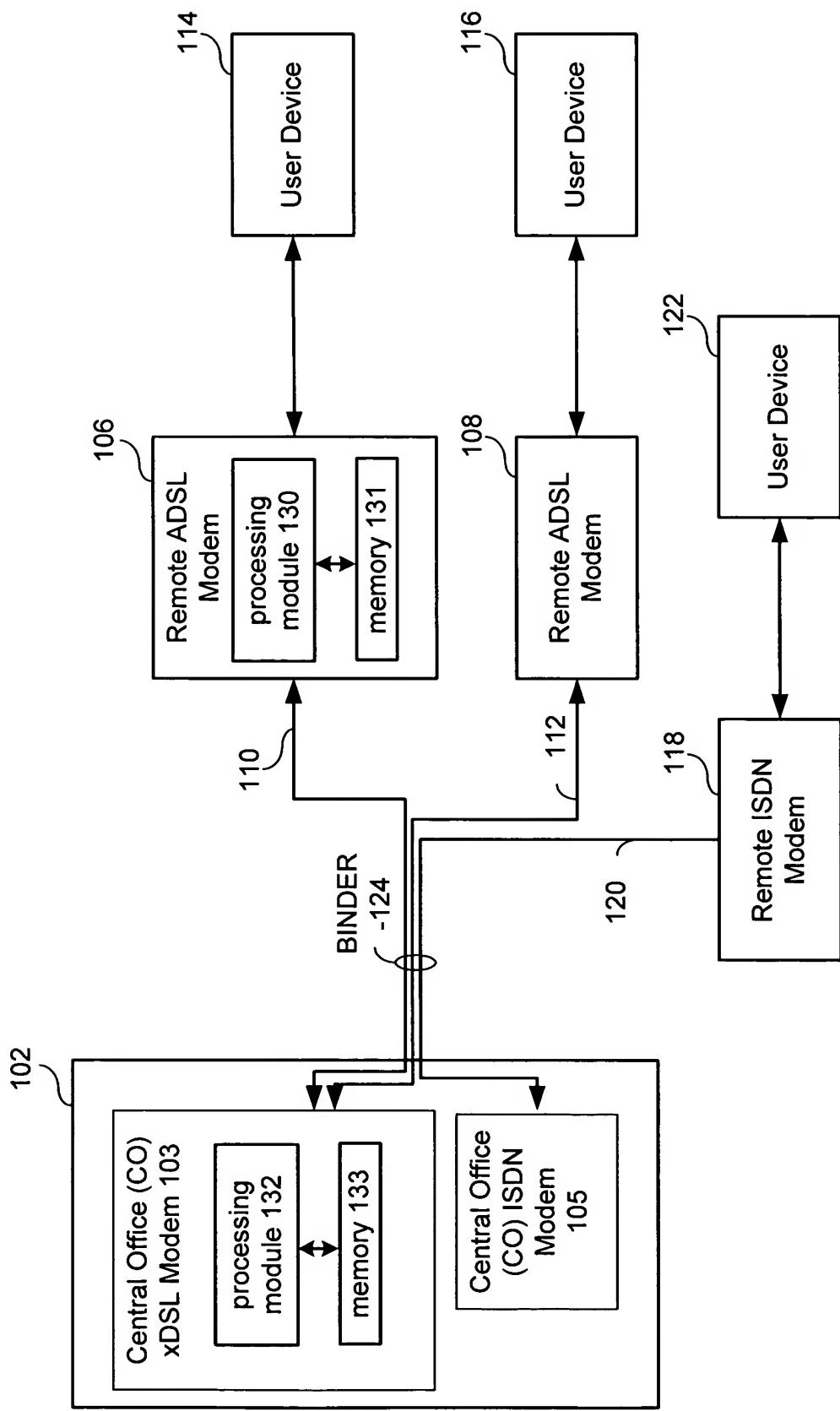


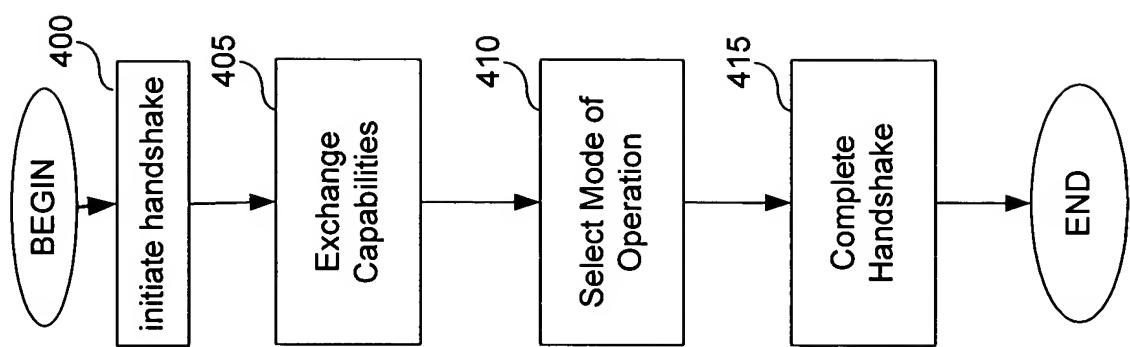
**FIG. 1**  
**PRIOR ART**

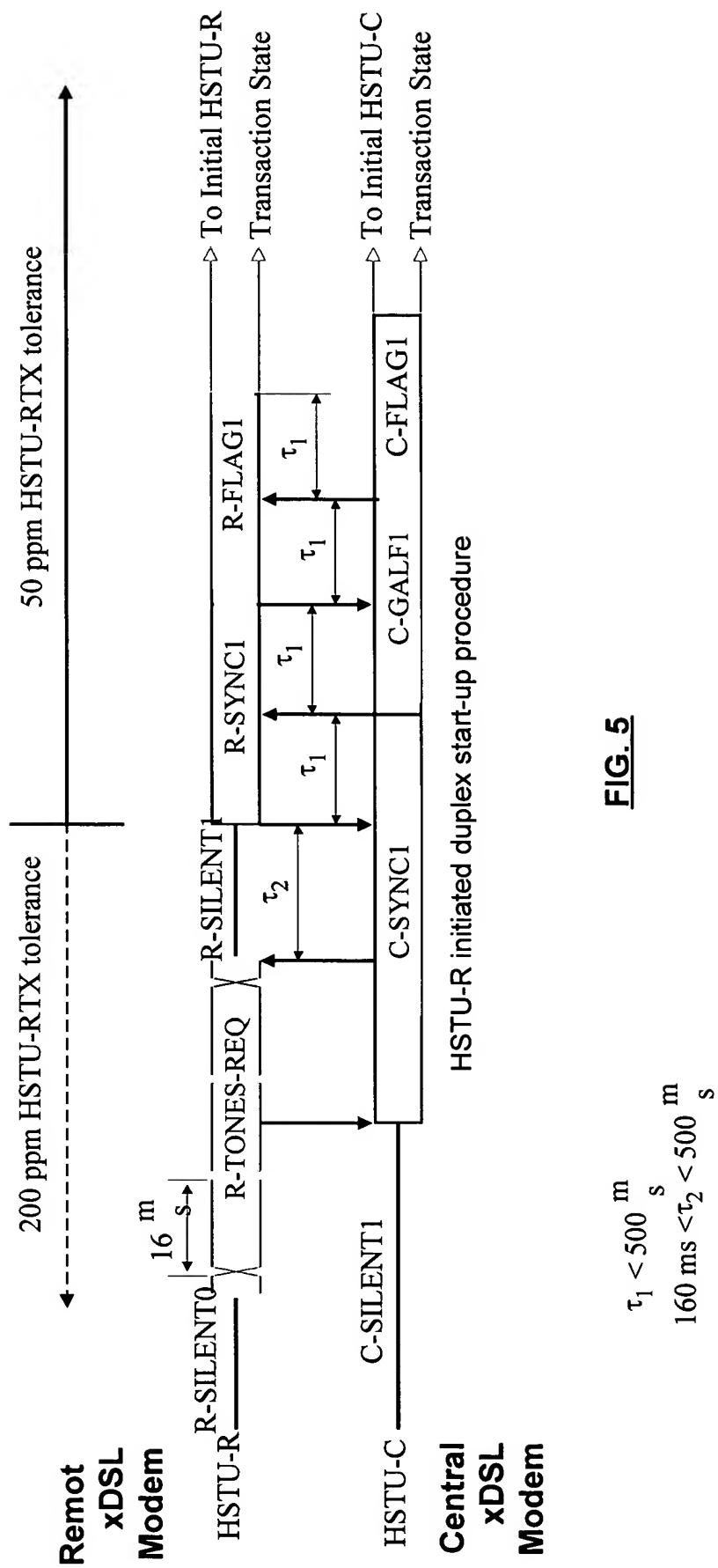




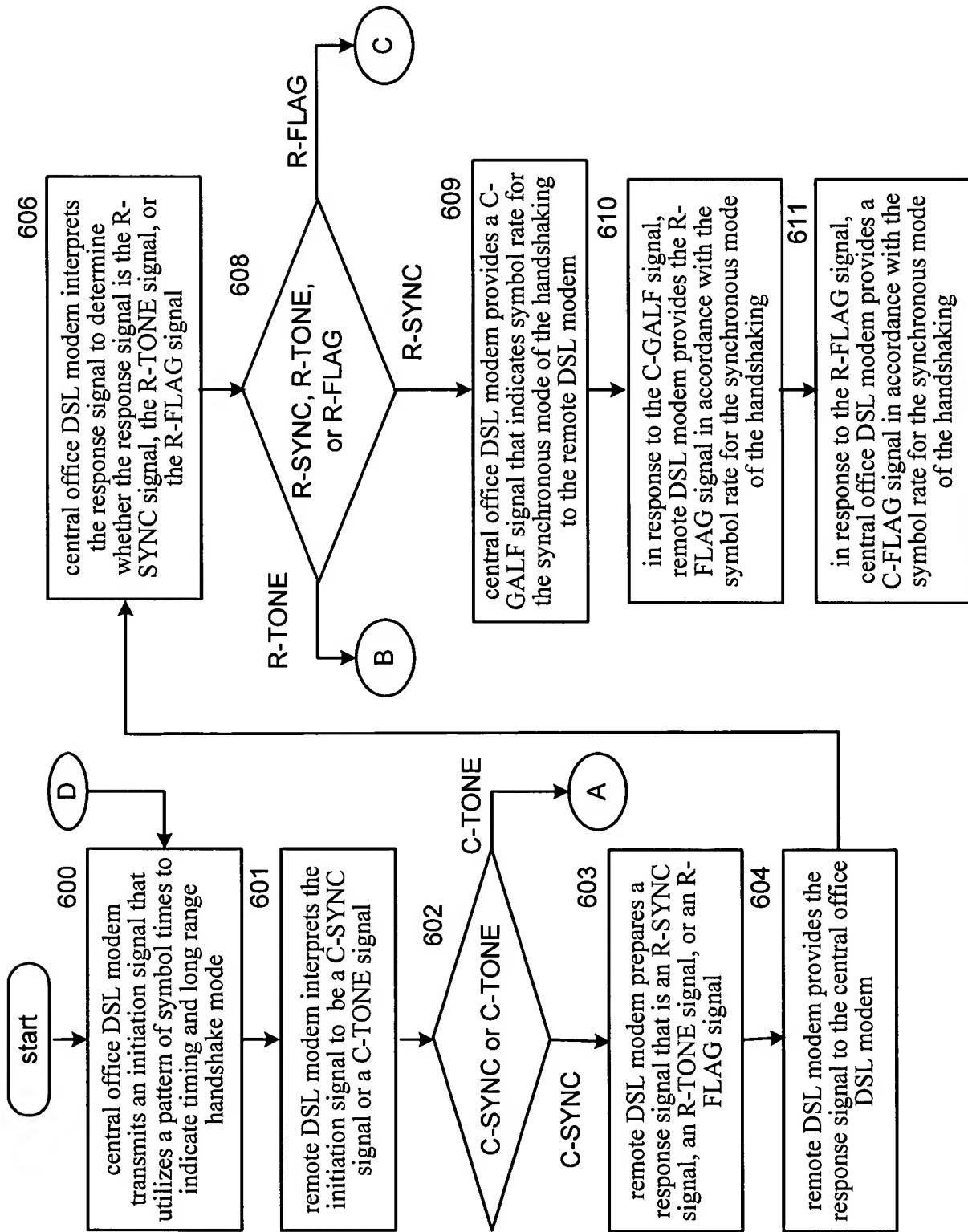
**FIG. 3**

**FIG. 4**

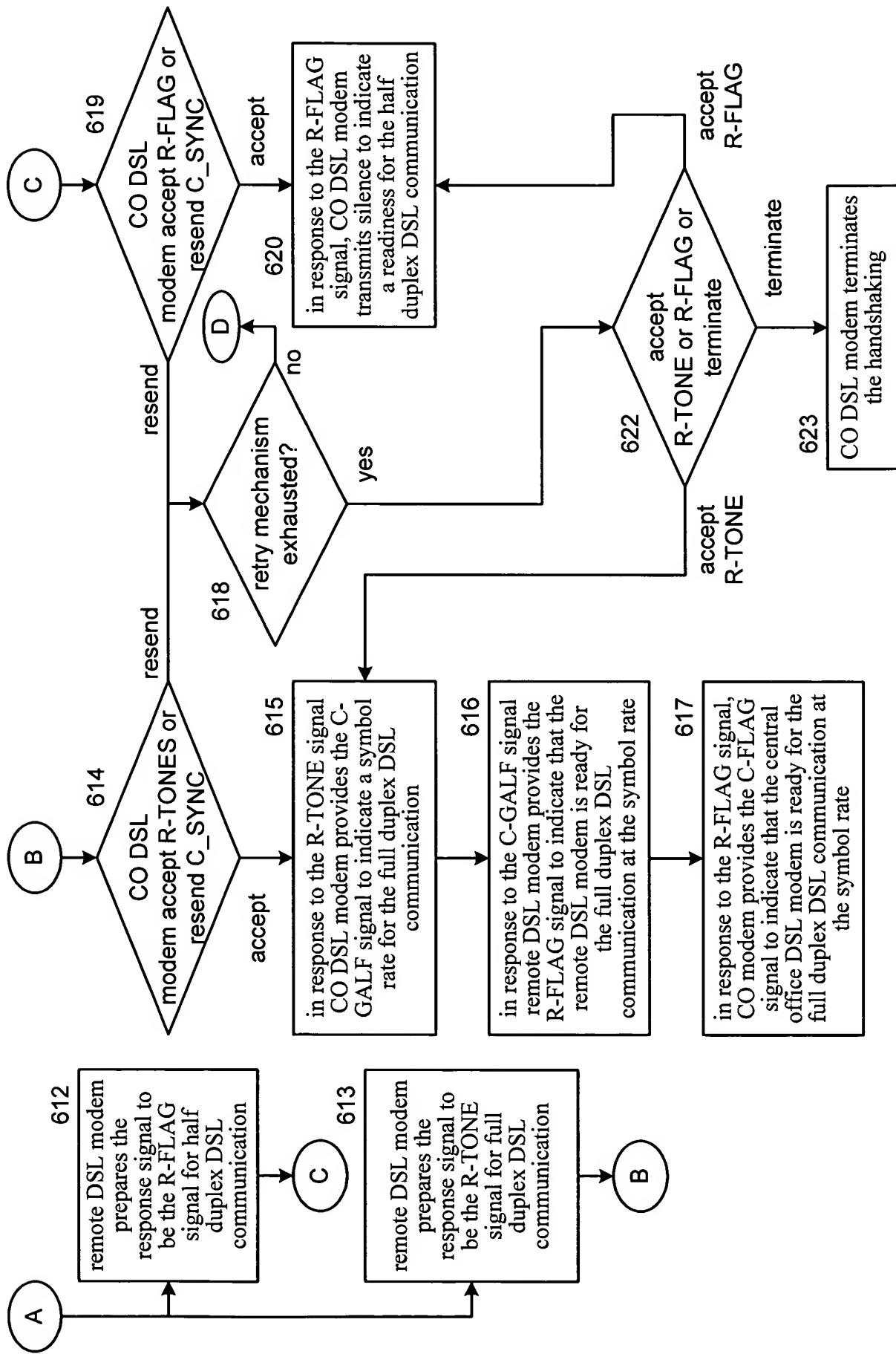


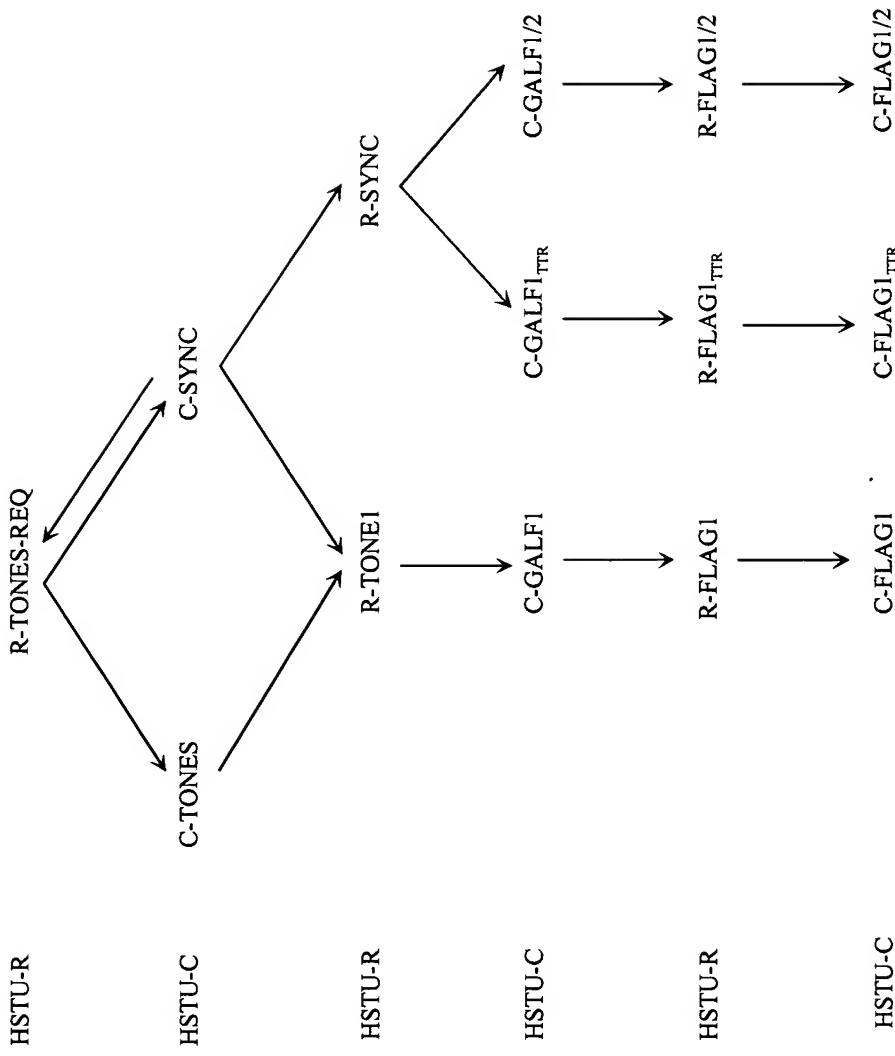


**FIG. 5**



**FIG. 6A**





**FIG. 7**  
remote DSL modem (HSTU-R) and central office DSL modem (HSTU-C) handshaking

TTRC	0	1	2	3	4	5	6	7	8	9	10
0	0	1	2	3	4	5	6	7	8	9	10
1	11	12	13	14	15	16	17	18	19	20	21
2	22	23	24	25	26	27	28	29	30	31	
3	32	33	34	35	36	37	38	39	40	41	42
4	43	44	45	46	47	48	49	50	51	52	53
5	54	55	56	57	58	59	60	61	62	63	64
6	65	66	67	68	69	70	71	72	73	74	
7	75	76	77	78	79	80	81	82	83	84	85
8	86	87	88	89	90	91	92	93	94	95	96
9	97	98	99	100	101	102	103	104	105	106	107
10	108	109	110	111	112	113	114	115	116	117	118
11	119	120	121	122	123	124	125	126	127	128	
12	129	130	131	132	133	134	135	136	137	138	139
13	140	141	142	143	144	145	146	147	148	149	150
14	151	152	153	154	155	156	157	158	159	160	161
15	162	163	164	165	166	167	168	169	170	171	172
16	173	174	175	176	177	178	179	180	181	182	
17	183	184	185	186	187	188	189	190	191	192	193
18	194	195	196	197	198	199	200	201	202	203	204
19	205	206	207	208	209	210	211	212	213	214	215
20	216	217	218	219	220	221	222	223	224	225	
21	226	227	228	229	230	231	232	233	234	235	236
22	237	238	239	240	241	242	243	244	245	246	247
23	248	249	250	251	252	253	254	255	256	257	258
24	259	260	261	262	263	264	265	266	267	268	269
25	270	271	272	273	274	275	276	277	278	279	
26	280	281	282	283	284	285	286	287	288	289	290
27	291	292	293	294	295	296	297	298	299	300	301
28	302	303	304	305	306	307	308	309	310	311	312
29	313	314	315	316	317	318	319	320	321	322	
30	323	324	325	326	327	328	329	330	331	332	333
31	334	335	336	337	338	339	340	341	342	343	344

**FIG. 8**

FEXT<sub>R</sub> symbols used for transmission during Annex S/G.994.1  
 NEXT<sub>R</sub> and unused FEXT<sub>R</sub> symbols

TTR <sub>R</sub>									
0	1	2	3	4	5	6	7	8	9
1	11	12	13	14	15	16	17	18	19
2	22	23	24	25	26	27	28	29	30
3	32	33	34	35	36	37	38	39	40
4	43	44	45	46	47	48	49	50	51
5	54	55	56	57	58	59	60	61	62
6	65	66	67	68	69	70	71	72	73
7	75	76	77	78	79	80	81	82	83
8	86	87	88	89	90	91	92	93	94
9	97	98	99	100	101	102	103	104	105
10	108	109	110	111	112	113	114	115	116
11	119	120	121	122	123	124	125	126	127
12	129	130	131	132	133	134	135	136	137
13	140	141	142	143	144	145	146	147	148
14	151	152	153	154	155	156	157	158	159
15	162	163	164	165	166	167	168	169	170
16	173	174	175	176	177	178	179	180	181
17	183	184	185	186	187	188	189	190	191
18	194	195	196	197	198	199	200	201	202
19	205	206	207	208	209	210	211	212	213
20	216	217	218	219	220	221	222	223	224
21	226	227	228	229	230	231	232	233	234
22	239	238	239	240	241	242	243	244	245
23	248	249	250	251	252	253	254	255	256
24	259	260	261	262	263	264	265	266	267
25	270	271	272	273	274	275	276	277	278
26	280	281	282	283	284	285	286	287	288
27	291	292	293	294	295	296	297	298	299
28	302	303	304	305	306	307	308	309	310
29	313	314	315	316	317	318	319	320	321
30	323	324	325	326	327	328	329	330	331
31	334	335	336	337	338	339	340	341	342

- FEXT<sub>C</sub> symbols used for transmission during Annex S/G.994.1
- NEXT<sub>C</sub> and unused FEXT<sub>C</sub> symbols

**FIG. 9**